

## Region 5 Superfund (SF)

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#### WHEELER PIT

**ROCK COUNTY** LA PRAIRIE TOWNSHIP EPA ID# WID980610620

Last Updated: December, 2009

Congressional District # 01

U.S. EPA REGION 5

## Site Description

The Wheeler Pit site, located in Rock County, Wisconsin, is a 3.75-acre former disposal area. It lies within a 35-acre abandoned gravel pit. Wheeler Pit originally was mined for sand and gravel by the Chicago, Milwaukee, St. Paul, and Pacific Railroad company. In 1956, General Motors Corporation (GMC) leased a four-acre portion of the pit from the railroad for waste disposal. From 1960 to 1974, GMC used Wheeler Pit to dispose of paint and waste water sludges from its Janesville auto assembly plant as well as coal ashes from power plant boilers. The sludge and ash were contained by a dike at the pit. In 1971, a liquid was found seeping on the ground from the GMC disposal area. Disposal at Wheeler Pit ceased in 1974, and the site was covered at the request of La Prairie Township. From 1974 to 1988, the site was monitored intermittently for groundwater contamination. Approximately 51,000 people live within three miles of the site. The Rock River is approximately two miles west of the site. the city of Janesville operates five groundwater wells within three miles of the site. Three of the wells supply virtually all of the Janesville water supply. Five private wells are located within one-quarter mile of the site.

## Site Responsibility

This site is being addressed through federal, state, and potentially responsible parties' actions.

## Threats and Contaminants

Elevated levels of the volatile organic compounds (VOCs), trichloroethylene (TCE), chromium, zinc, arsenic, and barium were found in site groundwater samples collected in 1981 by GMC and the Wisconsin Department of Natural Resources (WDNR). Groundwater resources, underlying the site, were found to be contaminated with heavy metals, including iron, manganese, chromium, and arsenic as well as low levels of VOCs. Soils and surface wastes contain heavy metals such as cadmium and lead and semi-VOCs.

## **Cleanup Progress**

Under a unilateral administrative order (UAO), GMC undertook the design and construction of the remedy at the site. The remedy consisted of construction of a multilayer cap, installation of a fence around the site to restrict access, consolidation of 36,400 cubic yards of waste and soil from neighboring property into the original disposal area, long-term groundwater monitoring, institutional controls of groundwater and land use on the site, and natural attenuation of the contaminated groundwater. The remedy addressed groundwater contaminants such as iron, manganese, chromium and arsenic and cadmium and lead in soils. Construction was completed in 1992, and the operation and maintenance phase began in 1993. Groundwater has been monitored since 1992, and in April 1997 a five-year review was performed to evaluate the protectiveness of the site remedy. A 1998 Five-Year Groundwater Assessment Report, prepared by GMC, has confirmed that groundwater

contaminants at the site have decreased to below the Wisconsin Preventive Action Limits http://www.epa.gov/region5superfund/npl/wisconsin/WID980610620.htm (PALs) except for one contaminant, manganese. Last updated on Thursday, February 24, 2011

A five-year review was completed in fall 2002 which determined that the site remedy was protective of human health and the environment. The five-year review recommended that an explanation of significant differences (ESD) be prepared to delete manganese from the site contaminants of concern. An ESD was issued in summer 2003. The site was subsequently delisted from the National Priorities List (NPL) on April 20, 2004.

A third-five year review was completed in September 2007 and determined that the remedy was protective of human health and the environment in the short-term. However, long-term protectiveness at the site requires that a mechanism be developed to regularly monitor existing groundwater and land use restrictions to ensure that these restrictions remain effective.

#### **Contacts**

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### **Site Profile Information**

This profile provides you with information on EPA's cleanup progress at this Superfund site.

### **About Garland Road Landfill**

The 15-acre site is located in Miami County, one mile south of West Milton. The property lies in the flood plain of the Stillwater River. Ohio EPA has been dealing with the site since 1991 when thousands of buried and exposed drums and other waste were discovered. Samples from the landfill property showed high levels of several dangerous substances such as poly-aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), pesticides and heavy metals.

EPA got involved in 1993 when the Agency issued a legal order so it could conduct an urgent cleanup action on the site to eliminate an imminent health threat. Three parties potentially responsible for the pollution were named at the time — General Motors Corp., Paul D. Theis and Waterwheel Farm Inc. General Motors conducted what was called a "time-critical" cleanup under EPA supervision. The cleanup project from 1994 to 1997 included erecting a six-foot-high chain link fence along the eastern boundary of the site, installing ground-water monitoring wells to determine if pollution was contaminating underground water, removing 13,000 drums and treating 14,000 tons of contaminated soil.

A 1995 consent order signed by EPA and General Motors required the development of the in-depth EE/CA in advance of a more permanent, long-term cleanup. The EE/CA included sampling of soil, ground water and sediment and made these conclusions:

- The time-critical cleanup project did not get all of the soil contamination at the site.
- VOCs appear to be the contaminant of most concern in the underground water. VOCs dissolve easily in water and evaporate into the air, releasing dangerous gases. The level of VOCs in the ground water was found to exceed safe drinking water standards, should that water ever be used for drinking.
- Surface water samples were not collected from the Stillwater River, but a potential exists for the VOCs found at the site to move into the river, which is a major recreational and fishing attraction in the area.
- Sediment in the Stillwater River has not been affected by the site contamination yet. Fish and small bottom-dwelling animals appear healthy. The latest proposed cleanup plan is partly designed to keep conditions that way.

## Health risks to people and the environment

EPA conducted a study to determine what kind of health risks the Garland Road Landfill pollution was causing to people and wildlife. The study, called a streamlined risk evaluation, or SRE, looked at how people and wildlife could possibly be exposed to pollution and whether such exposure could increase the risk of getting cancer or non-cancer illnesses. Potential cancer rates from the contamination were separated from average cancer risks.

The SRE assumed people could be exposed to site pollution by incidental swallowing of dirt, breathing particles and dust, and skin contact at the landfill. The SRE focused on contaminants found in on-site soil, Stillwater River sediment and in the underground water.

The SRE found people could be exposed to landfill pollution in three different ways. The ways include current trespassing on the landfill, current recreational use of the Stillwater River and future recreational use of the site. Cancer risks were found to be within the target risk range or acceptable levels for both trespassers and recreational users of the site and river. Trespassers and recreational river users are not at elevated risk for non-cancer health effects, the SRE found. Future on-site recreational users faced slightly higher non-cancer risks, according to the SRE.

Health risks were also considered for future users of the underground water for drinking water. Potential future users of ground water underneath the landfill site would appear to have a higher risk of cancer and other health effects.

As far as wildlife is concerned, the SRE found no evidence fish and animals were being harmed by site contamination. However, the Stillwater River is considered an important wildlife habitat and preventing the Garland Road pollution from moving into the river is a top priority of any cleanup plan.

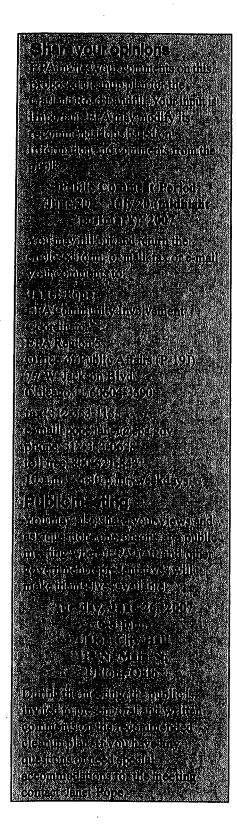
## Cleanup options

After extensive studies on the Garland Road pollution, EPA came up with four cleanup alternatives. EPA evaluated each of the four cleanup alternatives against three broad criteria and nine detailed criteria (see box for an explanation of the criteria on Page 7).

Three of the alternatives include land-use restrictions on the landfill property that will prohibit residential uses and new drinking water wells. These restrictions are called institutional controls. These restrictions will lessen the chances of human exposure to site pollution and prevent disturbance of the cap to be placed on the landfill. Each of the alternatives also calls for gas venting, fencing as



United States
Environmental Protection
Agency



## Special Cap, Underground Water Treatment Proposed for Cleanup

**Garland Road Landfill** 

West Milton, Ohio

June 2007

U.S. Environmental Protection Agency is proposing a special cap, treatment and monitoring of underground water and riverbank stabilization to clean up or contain pollution at the Garland Road Landfill. The landfill for years was used to dispose of a variety of waste including thousands of metal drums containing dangerous compounds. Many of the drums leaked or spilled and their hazardous contents contaminated soil and underground water located beneath the landfill. Underground water is called ground water in environmental terms.

In the mid-1990s, EPA and its state partner, Ohio Environmental Protection Agency, decided the landfill contamination posed a threat to human health and the environment and supervised a preliminary cleanup of the area. That project involved removing thousands of drums and treating tons of contaminated soil. However, more cleanup was needed as confirmed by further testing. This latest proposal is designed to treat or contain the pollution for the long term and protect the health of people and wildlife who come in contact with the landfill property or use nearby sections of the Stillwater River.

EPA's proposed cleanup plan calls for a special cap over the landfill that should stop rain and snow melt from seeping through the waste and polluting soil, mud (sediment) and ground water. The proposed plan also calls for riverbank stabilization, on-site ground-water treatment, ground-water monitoring, passive gas venting with an option for active venting, waste excavation and consolidation with wetlands construction, and legal restrictions on future development and land use.

A report on the landfill gives details about the contamination, health risks and proposed cleanup alternatives. This report, called an engineering evaluation/cost analysis, or EE/CA, is available for viewing at the Milton-Union Public Library in West Milton and Union City Hall.<sup>1</sup>

EPA came up with four alternatives for the latest cleanup project and identified its preferred option. The alternatives are described in more detail later in this fact sheet. The Agency will pick one of the four options as its final cleanup plan after a 30-day comment period and a public meeting. The selected cleanup plan will be announced with a local newspaper notice and in an EPA document called an action memorandum. People can discuss these proposed cleanup options with government representatives at the public meeting June 26 at the Union City Hall, and the public will have until July 20 to file written comments about the proposed plan (see lefthand box for more details). EPA could alter the proposed alternatives or even choose a new plan based on public comments so it is important your voice is heard.

<sup>&</sup>lt;sup>1</sup> Section 300.415(n)(4)(ii) and (iii) of the National Oil and Hazardous Substances Pollution Contingency Plan requires EPA to provide the public an opportunity to comment on the proposed Garland Road Landfill cleanup plan. This fact sheet summarizes the technical documents about the ground water, soil and sediment cleanup that are available for viewing at the official site repositories located in the Milton-Union Public Library in West Milton and Union City Hall.

needed, consolidating waste from the southern end of the site under the cap, construction of a functional wetland and long-term site monitoring. All alternatives are summarized below, but full details are available in the engineering evaluation/cost analysis document on file in the Milton-Union Public Library and Union City Hall.

Alternative 1 - No Action: A no action alternative is always included in EPA's analysis as a comparison point.

Cost - \$0

Alternative 2 — Containing landfill waste with a dual barrier cap, riverbank stabilization, ground-water monitoring and institutional controls: The proposed dual barrier landfill cap made of a layer of clay and a flexible membrane liner would meet Ohio's standards for a solid waste cap. This alternative is designed to eliminate all direct human contact with soil on the site and minimize the production of leachate from rain and snow melt. Leachate is water that collects pollutants as it trickles through waste. This cleanup option would also prevent contaminated soil from eroding into the Stillwater River.

Cost - \$6.5 million

Alternative 3 — Containing landfill waste with an impermeable (low penetrating) cap, sheet piling along the east side and south end of the site, leachate extraction and treatment, ground-water monitoring and institutional controls: In this option, an impermeable cap of clay, a geosynthetic (specially woven plastic) sheet or a combination of both would be placed over the landfill. Extraction wells would intercept the contaminated leachate and treat it with a technique called air stripping. The sheet piling would stabilize the riverbank to slow erosion and movement of the contaminants.

Cost - \$16.5 million

Alternative 4 — Containing landfill waste with an impermeable cap, riverbank stabilization, source area ground-water treatment, ground-water monitoring and institutional controls (this is EPA's preferred cleanup alternative): This option is similar to Alternative 3 in proposing the use of the clay, geosynthetic layer or combination cap. This option is similar to Alternative 2 in the type of riverbank stabilization proposed. This option also includes source-area treatment to ensure ground-water cleanup goals are met. Like Alternatives 2 and 3, this option is designed to eliminate all direct human contact with soil on the site and minimize the production of leachate from rain and snow melt. This cleanup option would also prevent contaminated soil from eroding into the Stillwater River.

Cost - \$5.6 million

### **Evaluation of alternatives**

The EE/CA evaluated the alternatives against the three broad criteria and the nine detailed criteria described in the comparison chart and EPA believes the best one is Alternative 4—containing landfill waste with an impermeable cap, riverbank stabilization, source area ground-water treatment, ground-water monitoring and institutional controls. EPA decided the "no action" alternative for contaminated soil and sediment would not protect people or the environment so it quickly rejected that option. Alternative 2 meets many of the cleanup goals but would not stop contaminated underground water from continuing to move as much as Alternatives 3 and 4. Alternative 3 is very expensive although it meets most of the cleanup goals, including slowing the movement of contaminated ground water.

Alternative 4 was judged to be the most cost-effective cleanup option. It combines the special cap of Alternative 3 with the erosion protection of Alternative 2. Under Alternative 4, the landfill cap would either be constructed of two feet of clay with two feet of frost protection and six inches of topsoil, or a geosynthetic liner with a drainage layer plus one foot of soil and six inches of topsoil. The option allows for a combination of both cap constructions depending on conditions found at the site. Once the cap is built, it will be seeded with native vegetation.

# Ohio EPA's proposal for an additional cleanup alternative

Ohio EPA suggested an additional cleanup alternative that starts with Alternative 2 as described above, but adds ground-water treatment like Alternative 4. The dual barrier cap of Alternative 2 would limit the infiltration of precipitation through wastes located above the water table to a slightly greater extent than the impermeable cap included with Alternative 4. Therefore, Alternative 2 would reduce the movement of contaminants from wastes above the water table, but it wouldn't offer any further measures to control source area ground water. Adding the kind of ground-water treatment that is included with Alternative 4 to Alternative 2 would provide for source area ground-water control. In reviewing Ohio EPA's suggestion, EPA considered the following:

- a significant portion of the waste at the site is relatively unaffected by the infiltration of precipitation because it is below the water table;
- neither cap can fully prevent the infiltration of flood waters that sometimes saturate a portion of the waste above the water table; and
- either kind of cap will prevent direct contact with the waste. EPA also considered that while the dual barrier cap of Alternative 2 is slightly more effective at

preventing infiltration of precipitation through wastes located above the water table than the impermeable cap included with Alternative 4, ground-water treatment will control when the ground water will meet cleanup goals. Given site-specific characteristics, Ohio EPA's suggested alternative offers effectiveness that is similar to Alternative 4, but at a significantly higher cost, and so EPA screened out the combination of Alternative 2 with ground-water treatment and it was not further considered in the EE/CA report.

## **Next steps**

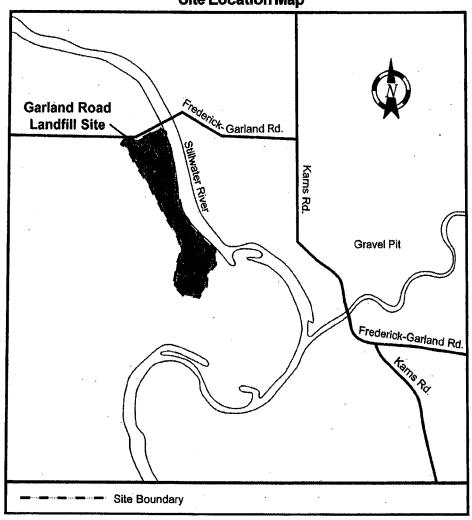
EPA in consultation with Ohio EPA will evaluate public reaction to the preferred cleanup plan during the comment period and at the public meeting before deciding on a final choice. Based on new information or public comments, EPA may modify its proposed option or select another of the cleanup alternatives outlined in this fact sheet. EPA encourages you to review and comment on the cleanup alternatives and attend the public meeting on June 26. Much

more detail on the cleanup alternatives is available in the official documents on file at the Milton-Union Public Library in West Milton and the Union City Hall.

EPA will respond to the comments in a file known as a responsiveness summary. It will become part of the administrative record for the final decision document, known as the action memorandum, which selects the cleanup plan. EPA will announce the selected cleanup plan in a local newspaper and will place copies of the action memorandum and responsiveness summary in the information repository at the local library and city hall.

After a final cleanup plan is chosen, EPA will notify the parties believed responsible for the pollution and request they conduct the site cleanup. Following negotiations with the potentially responsible parties, the final cleanup action will be designed and constructed. If the potentially responsible parties are unable or unwilling to conduct a cleanup, money may be used from EPA's Superfund. But EPA may later go to court to recover those costs from the potentially responsible parties. This entire process could last several years.

## Garland Road Landfill Site Location Map



pa.gov/superrods/index.cfm?fuseaction=data.rodinfo&id=0300123&mRod=03001231985ROD017

Last updated on Wednesday, March 02, 2011

Superfund Information Systems

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## **Record of Decision System (RODS)**

## HARVEY & KNOTT DRUM, INC.

#### **Abstract**

Site Name: HARVEY & KNOTT DRUM, INC.

Address: OLD COUNTY RD

City & State: KIRKWOOD DE 19708

**County: NEW CASTLE** 

**EPA ID:** DED980713093

EPA Region: 03

NPL Status: Currently on the Final NPL

ROD Type: Record of Decision ROD ID: EPA/ROD/R03-85/017

**ROD Date:** 09/30/1985

Operable Unit(s): 01

Media: GROUNDWATER SOIL SURFACE WATER WETLANDS

Contaminant: HEAVY METALS, INORGANICS, ORGANICS, PCBS

Abstract: THE HARVEY-KNOTT DRUM SITE IS LOCATED IN NEW CASTLE

COUNTY, DELAWARE, APPROXIMATELY ONE-HALF MILE EAST OF THE MARYLAND-DELAWARE BORDER. THE HARVEY AND KNOTTS TRUCKING, INC., OPERATED AN OPEN DUMP AND BURNING GROUND ON THE SITE BETWEEN 1963 AND 1969. THE FACILITY ACCEPTED SANITARY, MUNICIPAL, AND INDUSTRIAL WASTES BELIEVED TO BE

SLUDGES, PAINT PIGMENTS, AND SOLVENTS. WASTES WERE

EMPTIED ONTO THE GROUND, INTO EXCAVATED TRENCHES, OR LEFT IN DRUMS (SOME OF WHICH WERE BURIED). SOME OF THESE WASTES WERE EITHER BURNED AS A MEANS OF REDUCING WASTE VOLUME, OR ALLOWED TO SEEP INTO THE SOIL. CONTAMINATION OF SOIL, SURFACE WATER, AND GROUND WATER HAS OCCURRED AS

A RESULT OF DISPOSAL OF THESE INDUSTRIAL WASTES.

THE SELECTED REMEDIAL ACTION FOR THIS SITE INCLUDES; CLEANING THE ONSITE DRAINAGE POND BY COLLECTING AND TREATING SURFACE WATER; REMOVAL AND OFFSITE DISPOSAL OF CONTAMINATED SEDIMENTS, SLUDGES, AND BULK WASTES TO A QUALIFYING RCRA FACILITY; REMOVAL AND OFFSITE DISPOSAL OF ALL CRUSHED OR INTACT SURFACE DRUMS, DEBRIS, WASTEPILES, AND SLUDGES TO A QUALIFYING RCRA FACILITY; INSTALLATION OF GROUND WATER EXTRACTION AND TREATMENT FACILITIES TO COLLECT AND REMOVE CONTAMINANTS IN THE SHALLOW GROUND WATER; APPLYING TREATED GROUND WATER TO FLUSH CONTAMINANTS FROM ONSITE SURFACE AND SUBSURFACE SOILS;

09-50026-mg Doc 9546-1 Filed 03/02/11 Entered 03/02/11 14:13:03 Exhibit Pg 8 of 9

AND PREPARATION OF THE SITE SURFACE FOR INSTALLING THE FLUSHING PIPE NETWORK WHICH ENTAILS (A) GRADING THE ENTIRE APPLICATION AREA, (B) COVERING WITH A 24-INCH LAYER OF CLEAN SOIL, AND (C) ESTABLISHING PERMANENT VEGETATION AS A PRECAUTION AGAINST DIRECT CONTACT. TOTAL CAPITAL COST FOR THE SELECTED REMEDIAL ALTERNATIVE IS ESTIMATED TO BE \$3,572,000 WITH ANNUAL O&M COSTS APPROXIMATELY \$776,000 FOR YEARS 1-5, \$90,000 FOR YEARS 6-10 AND \$44,000 FOR YEARS 11-30. DECISIONS ON THE EXTENT OF AQUIFER RESTORATION. CLEANUP ACTIONS IN OFFSITE STREAMS AND WETLANDS, AND FINAL SITE CLOSURE WILL BE DEFERRED PENDING (A) ADDITIONAL SOIL INVESTIGATION DURING DESIGN, (B) ANALYSES ON THE EFFECTIVENESS OF THE CHOSEN ALTERNATIVE AND (C) THE IMPACTS OF THE SITE ON THE ADJACENT WETLANDS.

Remedy: SPECIFICALLY, THIS ALTERNATIVE INCLUDES THE FOLLOWING **ELEMENTS**;

- CLEANING THE ONSITE DRAINAGE POND BY COLLECTING AND TREATING SURFACE WATER (EST. 200,000 GALLONS). AFTER THE POND IS DEWATERED, REMOVAL AND DISPOSAL OF CONTAMINATED SEDIMENTS, SLUDGES AND BULK WASTES TO A QUALIFYING FACILITY PERMITTED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) 40 C.F.R. PART 264, SUBPART N. - REMOVAL AND DISPOSAL OF ALL CRUSHED OR INTACT SURFACE DRUMS, DEBRIS, WASTEPILES, AND SLUDGES TO A QUALIFYING RCRA FACILITY.
- INSTALLATION OF GROUND WATER EXTRACTION AND TREATMENT FACILITIES TO COLLECT AND REMOVE CONTAMINANTS IN THE SHALLOW GROUND WATER. TREATED GROUND WATER WILL THEN BE APPLIED TO FLUSH CONTAMINANTS FROM ONSITE SURFACE AND SUBSURFACE SOILS. IT IS ESTIMATED THAT THIS EXTRACTION/TREATMENT/FLUSHING PROGRAM WILL OPERATE FOR FIVE YEARS TO RESTORE THE AQUIFER TO DRINKING WATER QUALITY OR FINAL EPA APPROVED ALTERNATE CONCENTRATION LIMITS.
- PREPARATION OF THE SITE SURFACE FOR INSTALLING THE FLUSHING PIPE NETWORK WILL ENTAIL (A) GRADING THE ENTIRE APPLICATION AREA, (B) COVERING WITH A 24 INCH LAYER OF CLEAN SOIL, AND (C) ESTABLISHING PERMANENT VEGETATION AS A PRECAUTION AGAINST DIRECT CONTACT.

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